

## Principal Assessor Report 2002

**Assessment Panel:**

**Computing and Information Technology**

**Qualification area**

**Subject(s) and Level(s)  
included in this report**

**Computing Higher Level**

## Statistical information: update

<b>Number of entries in 2001</b>	
<b>Pre appeal</b>	4421
<b>Post appeal</b>	4708

<b>Number of entries in 2002</b>	
<b>Pre appeal</b>	4830
<b>Post appeal</b>	

### General comments re entry numbers

At this stage there appears to be a 3% increase in entries compared with 2001.

### General comments

In my opinion, after marking scripts and re-marking through the procedures, the candidature was broadly similar to last years. This is borne out by the comments of markers in their reports. The mark distribution was slightly different from last year's but I take this to be a result of differences in this year's paper which has been seen as very fair and clearly presented by many teachers. Though the overall pass rate has decreased by less than 1% from 2001, 72.4% – 71.7%, it compares favourably with the average pass rate across all subjects at Higher level.

## **Grade boundaries at C, B and A for each subject area included in the report**

Grade A:	70
Grade B:	59
Grade C:	48

### **General commentary on grade boundaries**

#### *Notional percentage cut-offs for each grade*

Question papers and their associated marking schemes are designed to be of the required standard and to meet the assessment specification for the subject/level concerned.

For National courses the examination paper(s) are set in order that a score of approximately 50% of the total marks for all components merits a grade C (based on the grade descriptions for that grade), and similarly a score of 70 % for a grade A. The lowest mark for a grade B is set by the computer software as half way between the C and A grade boundaries.

### **Comments on grade boundaries for each subject area**

The grade boundaries for the 2001 examination were 47, 58 and 69. I felt that the overall performance of candidates was generally similar to last year's candidates.

## Comments on candidate performance

### General comments

Very similar to previous years. Responses varied from excellent to very poor.

The accessibility of the paper obviously encouraged candidates to attempt questions as more candidates were answering more questions.

However too many candidates answered questions which asked for a "description" or "explanation" with single words or terms. For example when asked to describe a backup strategy too many candidates simply gave the name of a storage device or medium.

### Areas of external assessment in which candidates performed well

Generally candidates performed well in questions which required the recall of knowledge. However in many cases the depth of knowledge demonstrated fell below what is required at Higher. For example when asked about computer based training many candidates gave a Standard Grade description of simulations rather than demonstrating a more detailed knowledge of the wider applications of computer based training such as distance learning.

Question 7 on the stages of the software development process, question 13(a) on processor components, question 16(a) and (b) are some of the questions which were particularly well answered.

### Areas of external assessment in which candidates had difficulty

As I stated above, many candidates did not demonstrate a sufficiently detailed knowledge. For example when asked to describe how text is represented using ASCII many candidates gave a Standard Grade type answer such as "each character is represented by a number" without stating that the number would be stored in binary or giving any indication as to how many bits would be used to store each character.

Whilst candidates felt able to answer questions they were apparently not taking time to digest them before starting their response and frequently gained 0 marks for several lines of writing.

In general most candidates had difficulty with questions which required them to solve an unfamiliar problem. The latter parts of questions 17 and 18 were found to be particularly difficult.

The calculation in question 13(d) was not done as well as we would have expected. Many candidates were able to calculate the number of locations but did not know how to determine the size of each location from the given information. Some were happy to assume single bit locations.

In question 14(e) many candidates could state the three types of test data but could not give examples which were relevant to the context of the question. Some candidates were confused over the meanings of "extreme" and "exceptional" data.

## **Areas of common misunderstanding**

A large number of candidates did not fully understand the stored program concept. Many candidates were unable to give good definitions of system software and applications software. When describing a syntax error, many candidates simply said that it was a "spelling mistake".

Question 13(b) asked candidates to describe the steps of the memory read operation. Many candidates gave the steps of the fetch execute cycle. This was not penalised as a memory read is contained within that set of steps but it does show some misunderstanding. Scripting languages are still not well understood.

## **Recommendations**

### **Feedback to centres**

Centres should stress to candidates the need for detailed, accurate and complete descriptions of computing knowledge. A level of depth and breadth appropriate to Higher level is required.

Candidates should be reminded that when a question asks for a description or an explanation full marks will not be given for an answer which simply states the name of a device or the name of a feature of an application package.

Teachers often use analogies to explain concepts to pupils. Unfortunately many candidates produce these analogies as fact. For example answers containing the words "the data bus goes to the memory..." are extremely common.

Problem solving questions often require candidates to relate their answers to the context of the question. Many candidates simply write down all that they know without relating it to the context.

To achieve a grade A or B candidates must be able extract relevant knowledge from the text of a question and use that knowledge to solve a given problem which may be set in an unfamiliar context.